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* JUN 14 1905 *

B. U. Department of Agriculture

HENDERSON'S SUPERIOR

AGRICULTURAL = SEEDS

FOR FALL SOWING, 1905



PETER HENDERSON & CO.

35 & 37 CORTLANDT STREET, NEW YORK

HENDERSON'S SUPERIOR SEED WHEAT



**BEARDED
RURAL NEW YORKER**

HENDERSON'S SUPERIOR WINTER SEED WHEAT.

Prices are subject to the fluctuations of the market. The prices herein named are those ruling August, 1905.
Delivery f. o. b. New York, bags extra.

TWO NEW WHEATS FOR 1905.

Jones' Paris Prize (Beardless).

This is one of the Jones Wheats that was awarded the Grand Prize at St. Louis Exposition. A plot of this was grown on the Exposition grounds by the U. S. Agricultural Department and attracted special attention. It is a wheat of great promise and cannot fail to be one of the finest white wheats grown, and will be in great demand by manufacturers of Cereal Foods, as well as millers. Originated from a cross between Jones' Early Arcadian and a Russian White variety, a seedling from this was again crossed with Early Arcadian, the result from this cross being Paris Prize, which will be a leader in white wheats in all sections as soon as known, partaking from its Russian parent hardiness, white chaff and fine milling qualities, and from Early Arcadian strong, even, upright growth, wide, square-built, beardless head; plump, large grain, and was almost fly-proof when other sorts were destroyed. A field of this is worth seeing, with its large, square-built, white heads and sturdy straw. Price, \$1.50 per peck, \$4.00 per bushel.

Jones' Mammoth Amber (Bearded).

This fine variety of wheat originated from crossbreeding American Bronze. This cross was crossbred with Early Genesee Giant. The result from this combination resulted in a crossbreed that is sure to be a favorite with every farmer as soon as known, and will be in great demand with the millers wherever grown. It was awarded the Grand Prize at St. Louis Exposition. It is one of the most sturdy in growth. A strong, rapid grower and stouter in the fall, can be sown very late, and, like Silver Sheaf, is one of the few that will produce a heavy crop sown after late potatoes in October. Straw medium tall, thick-walled and very strong and large at base of head, which is carried nearly erect and without any tendency of breaking at heads, which are long, bearded, very squarely built from base to tip. Large, plump amber grain, and will be classed by millers as a hard, light amber, strong in gluten. It is one of very even growth, and stands like a wall through severe storms. Price, \$1.50 per peck, \$4.00 per bushel.

Silver Sheaf Longberry Red (Bearded).

The most perfect Longberry Red Wheat grown. It will prove to be the finest Longberry Red ever known, and will make a sensation among wheat growers and millers as soon as known. This marvel originated from a cross between the well-known American Bronze and a cross from Lancaster and a seedling Longberry. It is one of the hardest of all wheats, a strong, healthy grower and can be sown very late. If sown early, $1\frac{1}{4}$ bushels of seed per acre will be enough on strong soil. Straw of light yellow color, medium tall, thick-walled and strong; head long, wide and full; chaff thin and silvery-white; grain large, dark and flinty, and nearly as long as rye kernels. It will command the highest market price of any Longberry yet grown, and will be the leading fancy milling wheat of this country. Price, 80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

Early Red Chief (Beardless).

A very superior new wheat, for which we predict a grand future. It originated from Early Red Clawson and Red Arcadian. Without doubt, Early Red Chief will prove a wonder in the wheat line, being a rough-and-ready sort that can be depended upon for a granary filler even in unfavorable seasons. It is one of the strongest-growing and productive sorts yet introduced; its growth in the fall is strong, foliage large, thick and dark, covering the ground early in the season, and can be sown very late. It is one of the first to start in spring. Straw exceptionally thick-walled; strong heads, long and wide, carried erect, of a reddish-brown shade, completely packed with large, dark red kernels. Price, 80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

Two Grand
WINTER
WHEATS

RURAL NEW YORKER

Bearded
... AND ...
Beardless.

THESE are both the result of upwards of twenty years' thoroughly scientific crossing and careful selection at the hands of the late Mr. E. S. Carman, the well-known editor of the *Rural New Yorker*, and raiser of many of the most valuable agricultural introductions of recent years. These two varieties have been selected from hundreds of crosses and varieties as superior in all desirable qualities. They have now been grown in most wheat-growing sections, and most flattering testimony has been received by us regarding their merits.

"Bearded" Rural New Yorker

(Number 57)

has heavily-bearded heads which are beautifully symmetrical, being pointed at the tip, broad in the middle, and tapering towards the stem. The straw is unusually tall and strong and stools freely, frequently having 35 to 40 stalks from a single grain. The heads are compact, averaging three kernels to a spikelet or "breast," and ten breasts to a side. The kernels are of medium size and of an attractive color, between the so-called "red" and amber, possessing the requisite degree of hardness for the production of the finest grade of flour, and is much sought after by millers. The chaff is clear white, with a trace of velvet sufficient to make it difficult for the green fly to attack it, and the heads do not mildew as the full velvet chaff varieties are liable to do. (See cut.) 80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

"Beardless" Rural New Yorker

(Number 6)

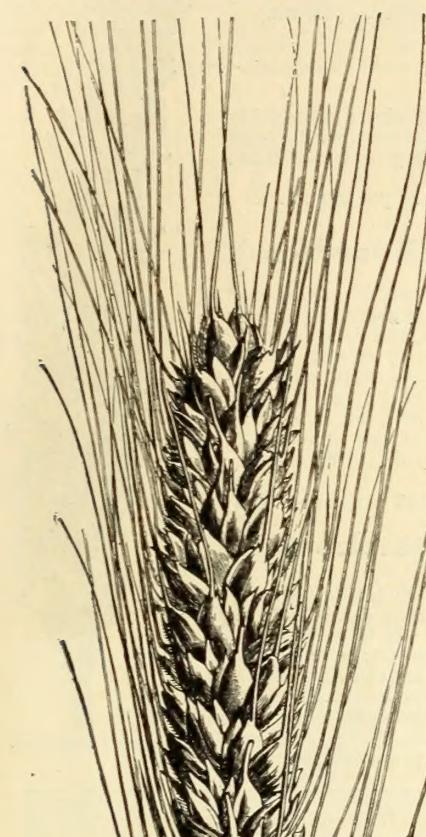
This beardless variety is a hybrid between Rye and Armstrong Wheat, though all traces of Rye have disappeared and it now appears a handsome, beardless Wheat. It succeeds and produces heavy crops on poor, thin land, where Wheat could not be successfully or profitably grown, and it also has extreme hardiness to recommend it. When first raised, some years ago, the top of the culms was downy with Rye culms. This characteristic could not be fixed, so that for this variety the culms having no down were alone selected. The gold-colored straw is very thick and strong, easily supporting the heavy grain without breaking. The large amber kernels are placed four to a breast, eight breasts to a side, with long symmetrical heads having a brown chaff. (See cut.) One of our growers says:

"It stools as strong as any wheat I ever saw. It had a vigorous, healthy growth all the season, and stood well without lodging. It is very hardy."

80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.



Beardless
Rural New Yorker (No. 6).



Bearded
Rural New Yorker
(No. 57).



BEARDED RURAL NEW YORKER

Jones' Bearded Longberry. (No. 1.)

WE are confident that this variety will prove to be the most profitable Longberry yet known—it is the result of experiments in crossing this type covering several years—and we feel that it will rapidly displace the old Longberries now no longer profitable on account of weak vitality and light yield, although their quality is the standard by which all other sorts are judged. JONES' BEARDED LONGBERRY (No. 1) is a grand variety and one of the most productive, hardy and profitable sorts ever sent out. It has made a record of 54½ bushels per acre. It has a sturdy, wiry straw of good length, not liable to lodge even on very fertile soil; heads long, wide and exceptionally well filled, bearded and of a rich brown shade; kernels large and long, of an attractive blending of red and amber, indicating to millers its high milling character and requisite hardness for producing a fine grade of flour. Especially adapted for late sowing, giving large yields when sown in October. (See cut.)

80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

Pride of Genesee (Bearded).

One of the most productive varieties, having a long, well-filled head, and the fact that it will give a reasonably good crop on land so poor that common sorts would be a failure, cannot fail to make it a popular sort, as the head does not decrease in proportion to the straw, being large and well filled on a very short, light growth of straw.

80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

Clawson Longberry (Beardless).

This grand cross-bred Longberry was produced from the same blood that bore the famous Red Clawson crossed with Longberry stock. It resembles, in some respects, Red Clawson in the field, but is a stronger grower and more prolific stouter, and has sturdy, wiry straw. Heads long, wide and full; chaff, brown and free from beards; grain, dark amber of the finest quality, large, long, and of true Longberry type. Like its parents, it delights in strong clay loam, and on such soil, with thorough preparation, it will often yield fifty bushels or more per acre. It is largely grown by some of the best wheat growers, by whom it is highly recommended. (See cut.) Sow 1½ bushels per acre.

80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.

Diamond Grit or Winter Saskatchewan (Bearded).

A worthy rival to the hard spring wheats. It is superior to every known winter wheat for milling, with the added advantage of making more and finer flour per bushel than any other sort. It is wonderfully productive, of medium height, and of strong, wiry growth; is extremely hardy and very early. The heads, of medium length, are closely set with grain, 4 and 5 kernels abreast—in fact, the head is nearly all grain, of dark red color, short, plump, and weighing 64 lbs. to the measured bushel. This wheat adapts itself to all soils, and has a promising future. (See cut.)

80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.25 per bushel.



Clawson Longberry.

DIAMOND GRIT OR WINTER SASKATCHEWAN



Jones' Bearded
Longberry
(No. 1).

Bearded Winter Fife.

A GRAND Wheat, the progeny of the celebrated Winter Fife crossed with two excellent seedlings. It retains all of the good qualities of the parents, marking a steady advance over the latter in quality, productiveness and the flinty character of the grain. It is without doubt the hardest of all wheats grown. In milling qualities it is superior, containing sufficient gluten for making quick-raising flour of chalk-like whiteness and light bread. It is one of the earliest wheats, ripening with the Early Red Clawson; a strong, healthy grower, stooling rapidly in the fall; starts early in the spring, and is one of the first to head. Straw a little above medium height, strong and wiry; heads very long, wide and well filled; chaff white and bearded; grain medium long, plump and of clear amber shade; bran exceptionally thin, hence will make more flour than most any sort grown. It is one of the heaviest-weighting sorts. It took the first place at the Kentucky Experiment Station over 17 other varieties grown under same conditions. (See cut.) 75c. per peck, \$2.15 per bush.; 10-bushel lots, \$2.00 per bush.



Bearded
Winter Fife.

Henderson's Superior Seed Wheat.

It costs almost as much to lay down an acre of wheat that yields only 15 bushels per acre as one that will yield from 35 to 50 bushels. The first scarcely returns the cost of the investment while the latter yields a handsome profit. The leading essential needed to attain such results is to sow Henderson's Superior Seed Wheat, which is grown especially for seed purposes from cross-bred, select pedigree strains of undoubted superiority.

Gold Coin (Beardless).

A very popular wheat that the increasing demand for the seed would indicate is a most satisfactory variety over a large extent of territory. It is unusually productive, having yielded over 60 bushels per acre—while 50 and over is not unusual—and even on large acreages it seldom runs under 40 bushels per acre. One of its enthusiastic users writes:

"It is the best variety for yielding and standing up ever placed before the American farmer, and fairly crowds out other kinds where it has been tried in this section."

"Clawson and Fife do well on my farm, but the Gold Coin does best of all. You should call it 'Henderson's Best of All Wheat.'"

The straw is very stiff and does not lodge even on the richest land. The head is long and compactly filled with choice white grain, frequently having five kernels abreast. (See cut.)

75c. per peck, \$2.15 per bush.; 10-bushel lots, \$2.00 per bush.

Pedigree (Early Genesee) Giant. (Half-Bearded.)

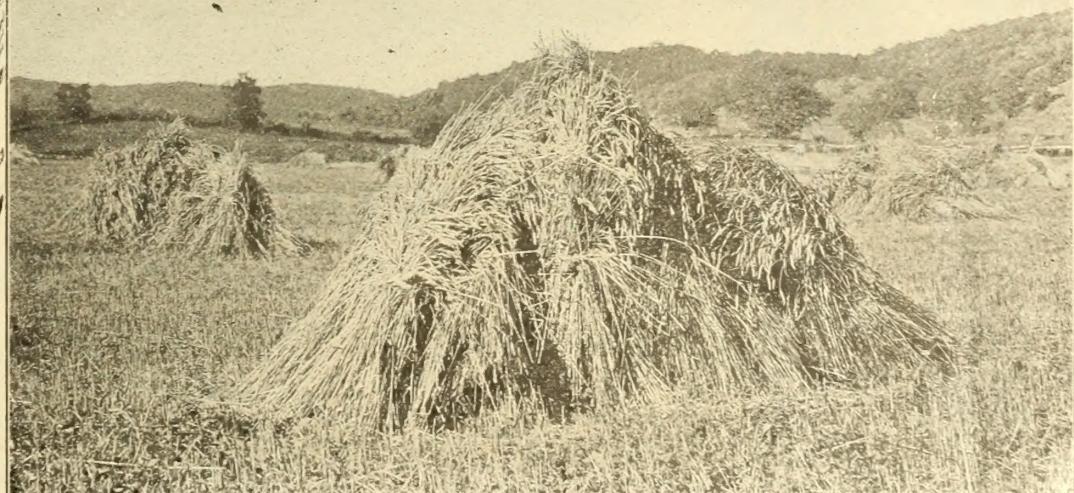
This variety is truly a wonder in the wheat line for thrifty fall growth, early spring stooling, strong, short-jointed straw, solid filled head, fine, hard, amber grain and exceptionally fine milling qualities. On strong clay loam or river bottom it has yielded at the rate of 60½ bushels per acre, and stands up well under high culture. It is a cross from the old Genesee Giant, possessing all of the good qualities of that famous variety when at its best. It is stronger in growth, more compact in head, and produces a very large grain. Can be sown very late with a certainty of standing the winter and gives an enormous yield. Sow late and use two bushels of seed per acre. (See cut.)

80c. per peck, \$2.00 per bush.; 10-bushel lots, \$2.25 per bush.



Gold Coin.

PEDIGREE EARLY GENESSEE GIANT



HENDERSON'S SUPERIOR... WINTER OATS.

WIINTER OR TURF OATS are quite extensively grown in the Southern States, where they are in high favor.

Sown in the fall they either afford excellent pasturage during the winter or give abundant yield the following season.

The demand for oats of this character has been gradually extending northward, and to meet it we have been growing in Northern Pennsylvania, for several years, an acclimatized strain which is remarkably hardy and will stand the winter as far north as New Jersey. They are incomparably superior to the Winter or Turf Oats of Virginia; they stool out strongly, are earlier, more vigorous and less susceptible to rust; they have stiff straw, stand up well, and are much more productive than Spring Oats. Sow in September, at the rate of $1\frac{1}{2}$ bushels per acre, and sow deep. They will stand much more severe weather when planted four inches deep than near the surface. (See cut.) 40c. peck, \$1.25 bushel of 32 lbs.; 10-bushel lots and upwards, \$1.20 bushel.

HENDERSON'S
SUPERIOR

WINTER OATS



Winter
Oats.



Giant
Winter
Rye.

HENDERSON'S SUPERIOR... WINTER RYE.

Rye is a valuable crop for either soiling, green fodder, straw or grain. It is largely used by farmers to seed down with in the fall, and is considered preferable to wheat for this purpose, as it protects the young grass, and matures two weeks earlier in the summer than wheat.

Winter.—The variety most commonly cultivated. \$1.25 bushel of 56 lbs.; 10-bushel lots, \$1.15 bushel.

Excelsior Winter.—A new variety from Vermont that has never failed to yield at the rate of 40 to 50 bushels per acre. With the originator, a four-acre field yielded 52 bushels to the acre. \$1.50 bushel of 56 lbs.; 10-bushel lots, \$1.40 bushel.

Thousandfold.—Said to be the most productive Rye in cultivation. \$1.50 bushel of 56 lbs.; 10-bushel lots, \$1.40 bushel.

Giant Winter.—Unquestionably the heaviest cropping Rye in existence, having in fair tests outyielded all other varieties both in straw and grain. The heads average six to eight inches in length and are filled from end to end with large, plump, heavy grains. The straw is giant in length and strength and of extraordinary stiffness, resisting severe wind and rain storms to a remarkable degree without lodging. (See cut.) \$1.75 bushel of 56 lbs.; 10-bushel lots, \$1.60 bushel.

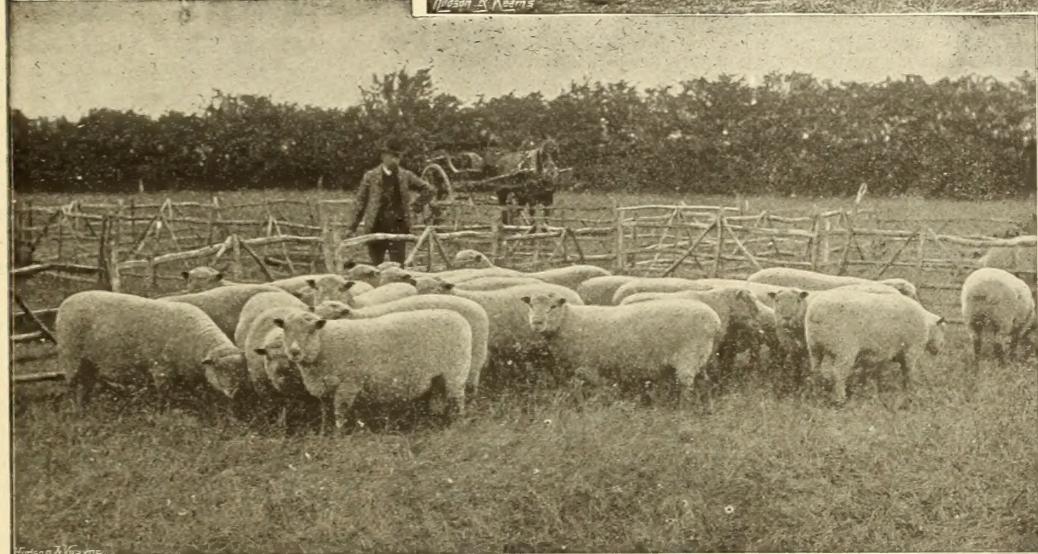
We are always pleased to hear from our farmer friends and offer any advice free on subjects connected with farm crops, etc.

Henderson's *SPECIAL GRASS MIXTURE* —FOR HAY AND— PERMANENT PASTURE

A few of many Letters of Praise from those who use it. We have hundreds more :: :: :: :: ::



Henderson & Co.



"I have used your Permanent Grass Mixtures for several years, and found them all you claim and very satisfactory, having yielded two fine crops every season."

E. J. GEHBEN, Wyckoff, N. J.

"The 40 bushels of Permanent Grass Seed I purchased of you in 1896 is the best field of grass on the Island."

BRADFORD NORMAN, Newport, R. I.

"Your Special Grass Mixture has done well for me. It produced, this season, the largest crop of hay that I ever saw cut off the ground, and has been yielding a most excellent pasture for over a month past, and this notwithstanding the extraordinary severity of the drought in this vicinity."

R. S. TAYLOR, Fort Wayne, Ind.

"I wish to say that about 8 years ago I bought a large quantity of your Mixed Permanent Grass Seed, which has given us most splendid crops of hay every year since."

E. L. NEWBOLD, Irvine, Pa.

"The Grass Mixture I got of you has done extra well, especially this year of drought. It stood the drought and yielded about twice as much as Timothy, and the cattle seem to do better on it."

WILLARD WATSON, Iowa.

"I am pleased to inform you that the 10-acre field which I seeded with your special mixture for Hay and Permanent Pasture last year was a great success, and was admired by the neighbors for miles around."

I harvested the first crop of hay on June 20th, which yielded at the rate of 5½ tons per acre. I harvested a second crop on September 1st, which yielded 2½ tons per acre, and I could have cut a third crop from it, but preferred to pasture it, and it gave good pasture to our stock right up to winter."

THOS. BIRMINGHAM,
Manager for Col. D. A. Kane,
"Paddocks," New Rochelle, N. Y.

"I have been particularly well pleased with my pastures during this exceptionally dry autumn. They were seeded with your Permanent Grass Mixtures six and seven years ago, and have steadily improved during that time. When ordinary pastures were bare during the dry weather these gave constant feed."

JAS. WOOD, Mount Kisco, N. Y.,
Ex-President New York State Agricultural Society.

"I wish I could send you a picture of my meadow of Permanent Grass now, after being cut twice, going into winter. I have the finest meadow in the county, says Geo. Lent, who keeps a thrashing machine and ought to know, as he goes about the county everywhere."

OTTO ANDREAE, Central Valley, N. Y.

"I wish you could see my Permanent Grass, it would do your heart good. I expect a very big crop."

R. P. McGRANN, Grand View Stock Farm,
Lancaster, Pa.

"I cut 80 one-horse loads of well-cured hay from the Grass Mixture, estimated at one-half ton per load. I am well pleased with the result and am satisfied I got much more than I would from any one kind of grass."

GUY SMITH, 71 Clinton St., Boston, Mass.

Henderson's Special Grass Mixture

FOR HAY AND PERMANENT PASTURE

PRODUCES WONDERFUL HAY CROPS AND LUXURIANT PASTURE.

THIS famous mixture has seeded thousands of acres of meadow and pasture land for progressive farmers and stock raisers in various parts of the United States, with most gratifying results. It is a well-balanced combination of a number of native and acclimated foreign grasses and clovers, blended and improved upon during exhaustive trials under widely varied conditions, soils and localities for several years, until practically perfect, our aim being to produce, under the extremes of the American climate of heat, drought and cold, a PERMANENT, dense and deep-rooting turf that would yield year after year the maximum quantity of hay and afterwards to afford, if desired, a constant and abundant pasturage. Another important essential being superior quality, inviting, sweet and nourishing, whether as hay or pasture. That we have been successful is attested by the numerous letters of praise for this special grass mixture that we have received from the users, and the tributes to its merits published in many of the agricultural journals. Space permits us to print extracts from but a few of these encomiums on pages 7 and 9.

The Yield of Hay under favorable conditions averages 3 to 4 tons per acre at the first cutting, or nearly double that of Timothy and Clover, and larger yields are not unusual; then, if not pastured, the second crop is usually about one-half the quantity of the first. This shows the great value of this special mixture of grasses over Timothy, which seldom yields a second crop, nor can it be pastured after cutting without seriously damaging the next season's yield, for Timothy after cutting throws its strength into its bulbous base, on which its yield the next season depends.

In Earliness this special grass mixture is about two weeks ahead of Timothy, enabling the haying to be finished before grain harvesting presses. This earliness gives a longer growing season for the aftermath, whether it is to be pastured or again cut for hay.

Pasturage. After the hay crop is cut the grass commences to grow at once, recovering its verdure in a few days' time and affording a continuous pasturage even through dry summer weather, until winter sets in; or the field may be pastured from earliest spring and still be in prime condition for yielding hay or pasture the next season, and so on year after year, for the various grasses composing this special mixture are all dense, fibrous-rooting varieties, sustaining no injury from cropping—proving its value over Timothy, which would be injured, probably ruined, under similar conditions.

Permanency. Henderson's Special Grass Mixture for Hay and Permanent Pasture, if properly laid down, will maintain its heavy cropping qualities twenty years and more if occasionally top-dressed with manure or suitable commercial fertilizer, and it will steadily improve, whereas a stand of Timothy soon commences to become thin and in three or four years must be plowed up and resown or rotated—with all of the attendant expense.

Heat and Drought-Resisting. The various kinds of grasses composing this special mixture are fibrous, deep-rooting varieties that spread and intermingle, forming a tough matted sod, free from stooling or tussock growth, and, in consequence, the grasses protect their own roots and are therefore less susceptible to extremes of heat and drought, retaining their verdure even through dry, hot weather, when Timothy is burned up.

Adapted to a Wide Range of Soils and Climate. This special mixture of grasses will thrive under a greater variety of soil and climatic conditions than Timothy, and in many instances gives bountiful returns where Timothy can scarcely be grown.

Daisies cannot exist in an established field of this special grass mixture—which covers the ground so thoroughly with dense turf, and if daisies be in the field they do not get a chance to seed, the hay being ready to cut before the daisies are ripe.

The Initial Cost is more in seeding with Henderson's Special Grass Mixture, **but** the ultimate returns are much more profitable than those from ordinary hay and pasture fields, and when the other advantages are considered—including the permanency of a maintained yield—the first expense will be found a paying and satisfactory investment.

The Seed Required. The amount of seed necessary to sow an acre largely depends on the quality of the land; the poorer the soil the larger the quantity required. Taking one soil with another, and owing to the fact that the seeds we use are of higher quality and better cleaned than ever, a fair average would be **3 bushels to the acre.** The thicker the seeds are sown the sooner will a fine, close turf be obtained.

To those accustomed to sow Timothy and Clover, the quantity of seed we recommend will seem large, but the seeds of these permanent grasses are quite different from Timothy, being much larger and lighter; but experience has proven that satisfactory results cannot be obtained with less seed than we recommend, unless under exceptionally favorable circumstances. It may be sown in either spring or fall.

A Description of Soil and Locality should be given when ordering. In the preparation of these mixtures for permanent pasture, the greatest care is exercised in selecting such varieties as are suited to the soil to be sown and are likely to realize the object in view. To facilitate this, **a description of the soil and climate, and the purpose for which sown,** and if **with or without** a grain crop, should accompany each order. **FULL DIRECTIONS FOR SOWING ENCLOSED IN EVERY BAG.**

PRICES

Henderson's Special Grass Mixture for Hay and Permanent Pasture,

for light soils, medium soils or heavy soils (state which in ordering):

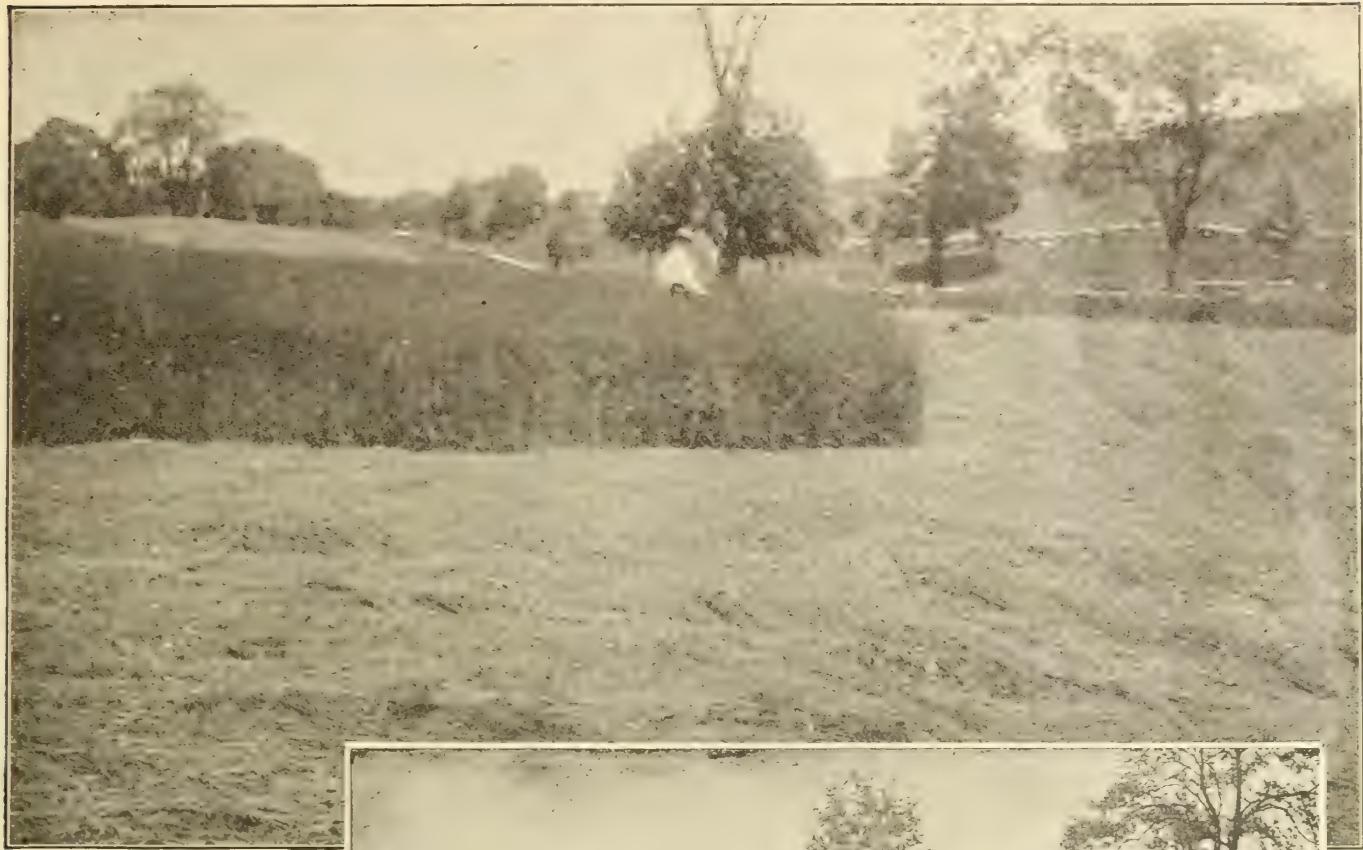
\$2.50 per bushel of 14 lbs.; 20-bushel lots @ \$2.45 per bushel; 50 bushels @ \$2.40; 100 bushels @ \$2.35.

Mixed Permanent Clovers

10 Pounds required for 1 acre, \$2.25.

Should be sown in addition to the above grass mixtures, but on account of greater weight the clover should be sown separately, and in cold latitudes, in the spring. This mixed clover comprises White, Mammoth Perennial or Cow Grass, Alsike, etc.

PROCURABLE ONLY FROM
PETER HENDERSON & CO., NEW YORK



HENDERSON'S...
SPECIAL
GRASS
MIXTURE
FOR HAY AND
PERMANENT
PASTURE.....



EXTRACTS FROM SOME OF THE TRIBUTES OF PRAISE BY THE AGRICULTURAL PRESS.

From "COUNTRY GENTLEMAN," published in Albany, N. Y.

GRASS CULTURE.

By invitation of Messrs. PETER HENDERSON & Co. of New York, a representative of this paper visited their experimental grass plots.

To reproduce English turf in the face of American droughts and heat may not be possible; to better the common clover and timothy practice, with its frequent thin results and speedy running out, is surely feasible. Instead of three or four varieties, ten to fifteen or twenty are used; tall and short grasses, coarse and fine, late and early sorts, are deftly combined in varying proportions according to the end in view.

Below the taller grasses was a thick mat of finer kinds, and the close, rich turf hid every particle of soil. There did not seem to be room for another spear of grass. Going over to an ordinary timothy meadow near by, the contrast was striking. The individual spears in a foot square could easily be counted; "standing-room" for more was abundant. The soil had not been "worked for all it was worth," and the thoughtful farmer might do some suggestive figuring.

From "RURAL NEW YORKER," published in N. Y. City.
THE VALUE OF GRASS SEED MIXTURES.

This firm (PETER HENDERSON & Co.) has been engaged in a long series of experiments in making up mixtures of grass seeds for hay and permanent pasture, and also for lawns. The underlying idea seems to be that these different grasses, having different root systems, will occupy the ground more fully if a number of different kinds are sown together.

The first piece we visited was one that was seeded with about three bushels per acre of Henderson's Special Grass Mixture for Hay and Permanent Pasture for Light Soil. Mowing had begun in this plot, and it was so thick on the bottom that much difficulty was experienced in getting the mower through it.

The earliness of the grasses as compared with Timothy is a desirable feature, as the haying season comes on at a time when there is little pressing work going on, and the hay is all in the barn before grain harvest. Few of the old-time methods of seeding will give an amount of hay equal to this first cutting, and after the hay is off, the grasses will start up again so quickly that fine pasturage will be afforded, or at least $1\frac{1}{2}$ tons per acre more hay may be cut in August or September.

From "AMERICAN AGRICULTURIST," published in New York City.

BEST GRASSES FOR HAY AND FOR PASTURE.

By a judicious choice of seeds, mixtures have been effected which will give constant pasture in this climate from early spring until late in the autumn.

Timothy, and in many parts "timothy and clover," is the standard grass in the country. While timothy is a valuable grass, there are some other kinds so much better, which last longer, yield a heavier crop, will stand various climatic and soil conditions better, it is astonishing that the majority of farmers should still stick to the timothy without even giving one or more of the other kinds and mixtures a fair trial.

It should be remembered that a discriminate mixture of grasses and clover gives a better result than does any kind grown by itself, for the simple reason that mixtures are bound to grow closer together on the ground, and thereby their component species protect one another from undue heat and drought.

Such mixtures are far superior to timothy or "timothy and clover," or any one grass, costing but a little more, lasting much longer, and giving frequently more than double the yield.

HENDERSON'S SPECIAL GRASS MIXTURE FOR PERMANENT PASTURE.



HENDERSON'S SPECIAL... FOR PERMANENT PASTURE

THERE is no more important part of a farm than a good pasture, and that can only be obtained by the use of the proper grasses, varieties that have different root formations and different habits and seasons of growth, in order to maintain a rich, close turf throughout the entire season. Timothy should never be used for pasture, because it will *not* stand trampling, and soon runs out when heavily pastured and at best is short-lived, as compared with the permanent grasses used in our Special Mixtures. These Mixtures contain over a dozen of the best permanent grasses, both American-grown and imported. All are permanent, and when once established **will last indefinitely**, if the fertility of the soil is kept up by occasional top-dressing. Owing to the different habits of growth, the grasses grow closer together and form a rich, close turf, covering the soil completely and forming a protection to the roots during hot, dry weather, thereby enabling these grasses to maintain a rich green appearance when Timothy and other grasses are burned up. The thick turf also prevents animals poaching through and destroying the pasture.

We have for years studied the subject of pastures and their formation with exhaustive tests on our own trial farms, where we have had growing separately and in different mixtures all the grasses of which seed can be procured in commercial quantities. These trials have been broadly studied and the results watched with critical interest on the farms of our customers. We are in an unrivalled position to advise you on the subject and to supply suitable grass seeds for Permanent Pasture. While it costs a little more to seed an acre with this special mixture, yet results are so superior and permanent that they more than offset the original cost. Sow not less than 3 bushels per acre. Directions enclosed in every bag.

PRICE: \$2.50 per bushel; 20 bushels @ \$2.45; 50 bushels @ \$2.40; 100 bushels @ \$2.35.
(State whether wanted for light, medium or heavy soils.)

Mixed Permanent Clovers, 10 lbs. to sow an acre, \$2.25. Should be sown in spring.

SUPPLIES
CONTINUOUS AND ABUNDANT
PASTURAGE

For 20 Years
AND MORE,

From Earliest Spring until
Winter.

GREEN AND SUGGULENT
ALL SUMMER LONG,
WHEN
ORDINARY GRAZING LANDS
ARE BURNED UP.

UNQUESTIONABLY
SUPERIOR.

HENDERSON'S PERMANENT GRASS MIXTURE FOR HAY



CUTTING 4½ TONS PER ACRE . SEVENTH YEAR AFTER SEEDING

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HENDERSON'S SPECIAL GRASS MIXTURE for PERMANENT HAY

PRODUCES
DOUBLE THE QUANTITY
of
TIMOTHY and CLOVER

and maintains the yield 20 years and
more.



SUPPLIES A GOOD CROP OF

HAY

In dry seasons when ordinary,
Hayfields are burned up. :: ::



QUALITY SUPERIOR.

ALTHOUGH the most widely cultivated hay grass in the United States is Timothy, or a mixture of Timothy and Clover, and while they answer the purpose admirably on farms where the soil is suitable and where the usual three and four years' rotation is carried on, yet, there are many other grasses which will yield more profitable returns.

The prevailing low prices of Wheat, Corn and other grain crops have made their growing, and the usual rotation farming unprofitable, especially in the Eastern States, where it is impossible to compete with the rich prairie soils of the West, but hay still yields a fair profit, and the farmer whose land is sown with a proper mixture of Permanent Grasses, requiring only an occasional top-dressing of manure or fertilizer to MAINTAIN THEIR HEAVY CROPPING QUALITIES FOR TWENTY YEARS OR MORE, does away with the necessity for plowing and rotation cropping with all its attendant expense.

The most serious item of expense on the farm, the labor bill, can be largely reduced and thus give reasonable prospect of profitable annual returns at a minimum of labor and expense. The seed of these Permanent Grasses is more costly than Timothy, and more is required per acre, but by reason of their heavy cropping qualities and permanency they soon repay the extra cost and leave a handsome margin for the farmer, when the cost of plowing, harrowing and re-seeding Timothy every three and four years is taken into consideration.

The grasses used in this Mixture recover quickly after the hay crop is cut, and yield either a second crop or pasture in the greatest abundance during the summer and fall months. Within a few days after cutting, their rich green appearance as compared with Timothy is a desirable feature, especially in fields close to the house, as it gives a park-lawn effect to the surroundings. *Sow 3 bushels per acre. Directions in every bushel.* Price, \$2.50 per bush.; 20 bush. @ \$2.45; 50 bush. @ \$2.40; 100 bush. @ \$2.35. (Whether wanted for light, medium or heavy soils.) Mixed Permanent Clovers, 10 lbs. to sow an acre, \$2.25; should be sown in spring.



HENDERSON'S Renovating Mixture FOR Improving Old Pastures.

\$2.50 per bushel of 14 lbs.

20-bushel lots, \$2.45 per bushel.

Mixed Clovers, 5 lbs. to sow an acre, \$1.15.

GRASS lands, in consequence of being constantly mown or pastured without being fertilized or manured, frequently become impoverished and deficient in the more valuable and nutritious grasses, and in time become unprofitable. It is frequently unnecessary to plow up such land unless it be full of weeds. The turf should be well harrowed with a sharp-tooth harrow, and, if possible, top-dressed with soil and well-rotted stable manure, which should be well harrowed in, and then sown with **HENDERSON'S RENOVATING MIXTURE**, at the rate of one bushel per acre, and five pounds of mixed clovers. This mixture is composed of those sorts that are best suited for sowing on old pastures or meadows, and it will speedily improve the quality and increase the produce. March and April are the best months for sowing, choosing an interval between rains if possible, though, if inconvenient to sow then, very satisfactory results can be obtained by fall sowing. After sowing, the ground should be lightly harrowed and afterward well rolled.



HENDERSON'S Special Grass Mixture FOR Woodland Pastures.

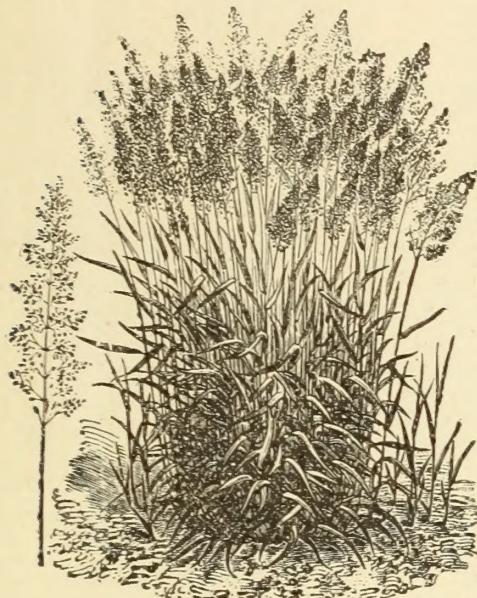
\$2.50 per bushel of 14 lbs.

20-bushel lots, \$2.45 per bushel.

UNLESS there is a superabundance of nitrogen in the soil and a consequent excessive wood growth, in which case it is desirable to sow the land with grasses, it is now customary to sow orchards with cover crops, such as Cow Peas, Clover, etc. These are plowed under and the orchard kept in constant cultivation. But where it is desired to sow the orchard with grass, or for woodland pastures, even when the shade is comparatively dense, we can with all confidence recommend this mixture.

It is composed of a selection of grasses which from exhaustive experiments we have found will thrive under trees. Orchard Grass is, of course, one of the best grasses for the purpose, but this mixture is much superior, as it will make a closer and more even pasture than Orchard Grass alone.

Henderson's Recleaned Grass Seeds FOR FALL SOWING.



RED TOP.

*Special quotations for large Quantities.
Prices subject to variation.*

Henderson's Superior Grass Seeds

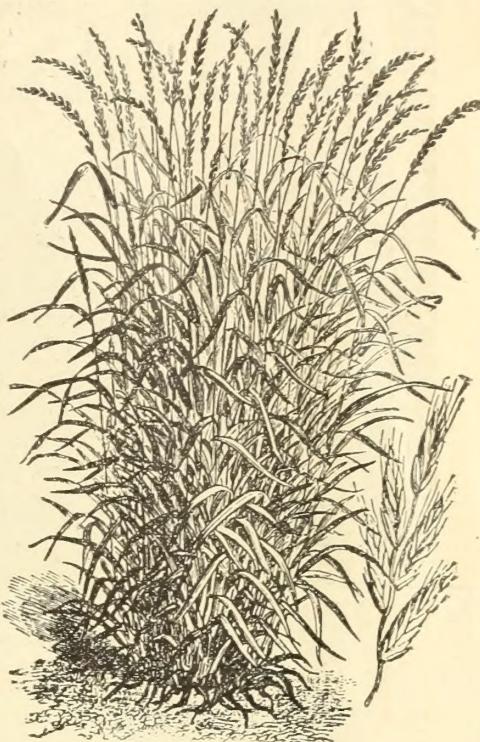
are of high germination and of choicest, recleaned quality. Our warehouses (250,000 bushels capacity), being especially equipped with the most modern seed-cleaning machinery, enable us to supply Recleaned Grass Seeds of undoubted superiority at lowest possible prices when quality is considered. We are to-day the largest suppliers of recleaned grass seeds direct to the farmer, and if at times lower prices are quoted, depend upon it that it is at the sacrifice of quality, for we are so equipped that NO ONE CAN UNDERSALE US FOR THE SAME QUALITIES.

At both the Pan-American Exposition and the World's Fair we received

SIXTY-FIVE MEDALS AND AWARDS,
a large proportion of which were granted to our Grasses and Clovers for superior quality and purity of sample.

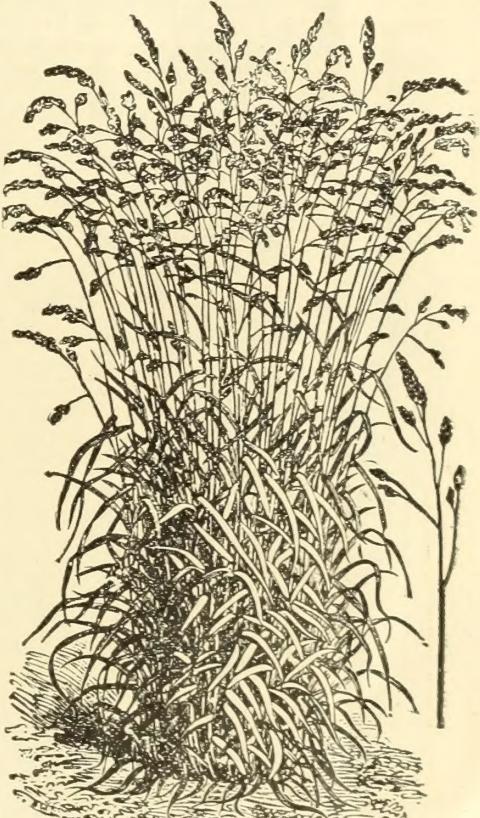
"After careful examination of samples from various sources and comparison of purity, germination and price, I have decided on ordering of you the greater proportion of grass seeds needed here at this time."

W.M. P. BROOKS,
Amherst, Mass.



ITALIAN RYE GRASS.

	Weight per bush.	Per bush.	Per lb.	Per 100 lbs.
AWNLESS BROME GRASS. (<i>Bromus Inermis.</i>) A new forage plant of the utmost importance, particularly in dry and Southern sections; yields enormously	14 lbs.	\$2.60	\$0.20	\$16.00
BERMUDA. (<i>Cynodon Dactylon.</i>) Valuable for Southern States, withstands the heat and drought	35 lbs.70	60.00
Canada Blue Grass. Useful for sowing on hard clay and poor soils	14 lbs.	1.75	.14	11.00
Creeping Bent Grass. (<i>Agrostis Stolonifera.</i>) Excellent for lawns; succeeds well in moist situations. About 2 bushels to the acre.....	20 lbs.	5.25	.28	25.00
Crested Dog's Tail. (<i>Cynosurus Cristatus.</i>) Should enter in moderate quantity in permanent pasture mixtures and lawns.....	21 lbs.	10.00	.50	45.00
ENGLISH RYE GRASS. (<i>Lolium Perenne.</i>) A valuable Grass. 2½ to 3 bushels to the acre.....	24 lbs.	2 10	.10	8.00
Fine-Leaved Sheep's Fescue. (<i>Festuca Ovina Tenuifolia</i>)	14 lbs.	5.75	.45	40.00
HARD FESCUE. (<i>Festuca Duriuscula.</i>) Dwarf, hardy grass, of great value for dry situations. Indicates superior quality in hay.....	12 lbs.	2.00	.18	15.00
HUNGARIAN GRASS. (<i>Panicum Germanicum.</i>) Is a valuable annual forage plant. 1 bushel to the acre. Price variable. 10-bu. lots, \$2.20	48 lbs.	2.10
ITALIAN RYE GRASS. (<i>Lolium Italicum.</i>) Unequaled for producing an abundance of early spring feed, giving quick and successive growths throughout the season.....	18 lbs.	1.50	.10	8.00
Johnson Grass. (<i>Sorghum Halapense.</i>) Of greatest importance for the South. Very tender and nutritious	25 lbs.	4.00	.18	14.00
KENTUCKY BLUE GRASS. (<i>Poa Pratensis.</i>) Very valuable for a variety of soils from moist to dry, furnishes delicious and luxuriant pasturage and makes excellent hay. Fancy or double extra clean....	14 lbs.	2.35	.20	16.00
MEADOW FESCUE. (<i>Festuca Pratensis.</i>) Of great value for permanent pasture and hay, robust grower and nutritious.....	22 lbs.	*3.25	.16	13.00
MEADOW FOXTAIL. (<i>Alopecurus Pratensis.</i>) Resembles Timothy, but of much earlier and more rapid growth, particularly valuable for permanent pastures and hay. (See cut).	7 lbs.	2.35	.35	30.00
ORCHARD GRASS. (<i>Dactylis Glomerata.</i>) One of the most valuable of all grasses, for either grazing or mowing, of early, rapid and luxuriant growth. (See cut).	14 lbs.	2.75	.22	19.00
Red or Creeping Fescue. (<i>Festuca Rubra.</i>) Suitable for sandy sea-coasts and dry soils.....	14 lbs.	3.65	.28	24.00
RED TOP GRASS. (<i>Agrostis Vulgaris.</i>)	14 lbs.	1.45	.12	8.00
Fancy recleaned silver seed	32 lbs.	4.75	.16	14.00
Rhode Island Bent Grass. (<i>Agrostis Canina.</i>) A very fine variety for lawns. About 3 bushels to the acre.....	14 lbs.	5.25	.40	35.00
Rough-Stalked Meadow Grass. (<i>Poa Trivialis.</i>) Valuable for pastures and meadows, particularly on damp soils. 1 ½ bushels to the acre.....	14 lbs.	5.25	.40	35.00
SHEEP'S FESCUE. (<i>Festuca Ovina.</i>) Excellent for uplands and dry pastures, of close, dense and nutritive growth, relished by sheep.....	12 lbs.	2.00	.18	15.00
Sweet Vernal Grass. True Perennial. (<i>Anthoxanthum Odoratum.</i>) Very aromatic, giving hay a fine flavor.....	10 lbs.	9.00	1.00
TALL MEADOW FESCUE. (<i>Festuca Elatior.</i>) Very early, nutritive and productive. Valuable on wet or clay soils	14 lbs.	4.50	.35	30.00
TALL MEADOW OAT GRASS. (<i>Avena Elatior.</i>) Recommended for soilings, being rapid and luxuriant in its growth. 4 to 5 bush. per acre	10 lbs.	3.30	.35	30.00
TIMOTHY. (<i>Phleum Pratense.</i>) We offer a particularly "choice" sample. ½ bushel per acre. Price variable.....	45 lbs.	3.00	.10	6.50
Various-Leaved Fescue. (<i>Festuca Heterophylla.</i>)	14 lbs.	3.65	.28	25.00
Wood Meadow Grass. (<i>Poa Nemoralis.</i>) Of early growth and thriving well under trees. 2 bushels to the acre.....	14 lbs.	5.75	.45	40.00



ORCHARD GRASS.

Dwarf Essex Rape



At the Michigan Experiment Station, 128 lambs were pastured for eight weeks on 15 acres of Rape sown in July, and showed a gain of 2,890 lbs., or at the rate of 3 lbs. per lamb each week.

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TRUE DWARF ESSEX RAPE.

Valuable for Cattle, Sheep and Hogs.

In the United States we have millions of acres of good land that annually lie idle or run to weeds the latter part of the season, after the grain, potato and hay crops have been harvested, a large portion of which might be made to produce one of the finest feeds imaginable, and in the greatest abundance, at a time when cattle, sheep and hogs are roaming through bare pastures in search of a scanty living. Under favorable conditions it is ready for pasturing sheep or cattle within six weeks from time of sowing, and on an average one acre will carry twelve to fifteen sheep six weeks to two months. When on the Rape they should at all times have access to salt; but water is not necessary. There are several varieties of Rape, but care should be taken to procure the Dwarf Essex, or English, as it is sometimes called, which does not seed the same season as sown, unless in some exceptional cases, as when sown too early and the young plant is touched by frost. In the Northern States it should be sown from April to end of August for fall pasturing, but as it thrives best in cool weather, it should not be sown in the Southern States until September, or October for winter pasture. In the latitude of New York it should be sown in April, or in July or August. Its fattening properties are probably twice as good as those of Clover, and for sheep the feeding value of Rape excels all other plants we know of. At the Michigan Experiment Station, 128 lambs were pastured for eight weeks on 15 acres of Rape sown in July, and showed a gain of 2,890 lbs., or at the rate of 3 lbs. per lamb each week. Even so far South as Alabama it has proved a boon to the farmer. In a recent bulletin published by the Alabama Experiment Station they state: "Quality of product good for both hogs and cattle. The growth was enormous. By repeated sowings it will and did carry more hogs through our dry, hot summers than four times the amount of land planted in anything else ever grown here. I would recommend it to all Southern farmers." To secure the best results, the Rape should be sown in drills. Sow 4 lbs per acre broadcast, 2 to 3 lbs. per acre in drills. (See cut.) Price, 10c. lb., \$3.25 bushel of 50 lbs., 100 lbs. \$6.00. If by mail, add 8c. per lb.

SAND, OR WINTER VETCH.

(*Vicia Villosa*.)

Though it succeeds and produces good crops on poor, sandy soils, it is much more vigorous on good land and grows to a height of 4 to 5 feet. It is perfectly hardy throughout the United States, remaining green all winter, and should be sown during August and September, mixed with Mammoth Red Clover, in sections where it will not winter-kill, or with Rye, which serves as a support for the plants; or in spring with Oats or Barley.

It is the earliest crop for cutting, being nearly a month earlier than Scarlet Clover, and a full crop can be taken off the land in time for planting spring crops. Being much hardier than Scarlet Clover, this is the Forage Plant to sow in the Northern States, where Scarlet Clover winter-kills, though it is equally valuable in the South. Every dairyman and stock-breeder in the United States should have a field of it, and if you try it once you will never be a season without it.

It is exceedingly nutritious, much more so than Clover, is eaten with relish, and may be fed with safety to all kinds of stock.

It will also prove valuable for a Hay crop in the South and dry Western regions, as it may be sown in the fall and will make a luxuriant growth during the fall and spring months, and will yield a heavy crop, which may be cut and stored before the droughts set in.

Sow one bushel per acre, with one-half bushel of Rye or Wheat. (See cut.) Price, 10c. lb., \$6.50 bushel of 60 lbs., 100 lbs. \$10.50. If by mail, add 8c. per lb.

ALFALFA or LUCERN.

(*Medicago sativa.*)

THIS clover-like, leguminous plant is perhaps the most valuable permanent crop for forage and hay that is grown, yielding, when established, regardless of drought, enormous crops annually for many years. Three to six cuttings are usually harvested per season, aggregating three to eight tons of cured hay per acre, and a yield of eight to twelve tons under favorable conditions is not unusual. The feeding value of Alfalfa is very high, being rich in protein—the blood, muscle and bone-forming elements required for growing animals; it is also a rich milk and butter producer when fed to cows. It is greatly relished by all stock either in pasture or cut and fed green or as cured hay, and they all thrive on it, though there is danger that cattle and sheep may bloat if turned into a luxuriant pasture of Alfalfa while the dew is on.

Alfalfa is a great improver of the soil, gathering nitrogen from the air and adding it with humus to the soil when the deep-rooted stubble is plowed under, thus putting the land in fine condition for following crops. Alfalfa may be successfully grown in almost every State in the Union when the essential conditions can be supplied. Its best development is attained under the particularly congenial conditions in the Western and Pacific Coast States, yet its cultivation is rapidly increasing in the Middle and Eastern States, as its requirements and culture are better understood. The Alfalfa plant grows three to five feet high and sends a single tap root down into the soil eight to twelve feet, and in deep, sandy soils twenty to thirty feet; in consequence, it thrives best where soil and subsoil will permit of deep penetration of the roots about which water must not stand. A congenial soil is sandy loam with permeable subsoil, though it will thrive in any sweet, well-drained soil excepting heavy clay and low, wet land. Calcareous soil suits it especially well.

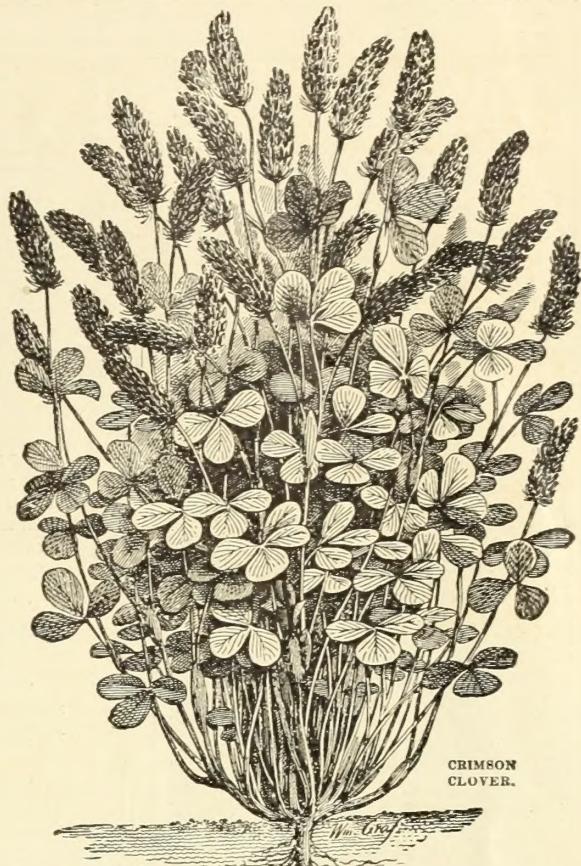
Another essential is to get the plants well established. The young seedlings being rather delicate, the best results have been attained in the East where the seed has been drilled in during the spring in rows twelve to eighteen inches apart and then cultivated the first summer; by this method, the young plants keep ahead of the weeds and get a good, strong start, after which they are able to care for themselves. A small crop may then be taken off late in the season, provided it is cut early enough to allow five or six leaves to develop before winter sets in, or is cut about six inches above the ground. Full cropping must not be expected until the second year, but after a field of Alfalfa is established it lasts for a lifetime, continuing to yield annually, regardless of droughts, phenomenal crops, amply repaying the expenditure of time and trouble. Alfalfa should be cut as soon as it begins to flower.

The time to sow in the Middle and Eastern States is in the spring, 20 to 25 lbs. per acre if broadcasted or 15 to 20 lbs. if drilled in, the latter method being advised; in the South sow in February or September. (See cut.)

Price, Henderson's Superior Alfalfa Seed, 22 cts. per lb., \$12.75 per bushel of 60 lbs., \$20.00 per 100 lbs.

"The Government analysis of the sample of Alfalfa sent to me some time ago, I am glad to say, stood ahead of twelve other samples sent to the Government at the same time. Kindly quote me price delivered to Wilcox Wharf, Va., or enough to sow sixty acres."

E. A. SAUNDERS, JR., Richmond, Va.



CRIMSON CLOVER.

CRIMSON or SCARLET CLOVER.

(*Trifolium Incarnatum.*)

ALL lands from which crops have been harvested during the summer and fall should be sown with Scarlet Clover for plowing under the following spring. The plowing under a good crop of Scarlet Clover is equivalent to 20 tons of stable manure per acre.

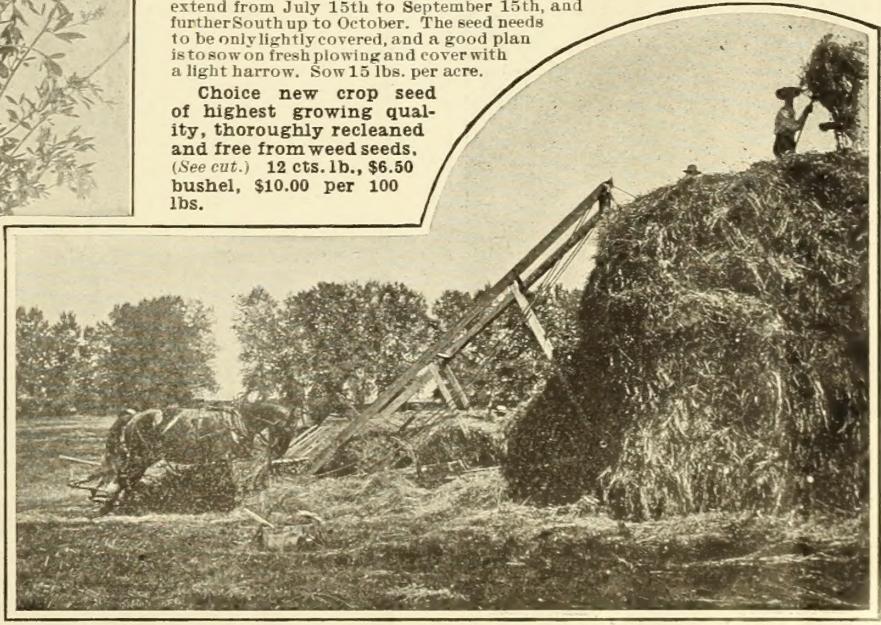
If intended for feeding, it should always be cut while in the young stage and never fed to stock after the crop has ceased flowering, as serious results are apt to follow the feeding of over-ripe Crimson Clover. It is the cheapest source of nitrogen and should be extensively used throughout the entire Eastern States. Its value as a winter soil mulch and for green manuring for orchards cannot be overestimated.

In the latitude of New York, time for sowing may extend from July 15th to September 15th, and further South up to October. The seed needs to be only lightly covered, and a good plan is to sow on fresh plowing and cover with a light harrow. Sow 15 lbs. per acre.

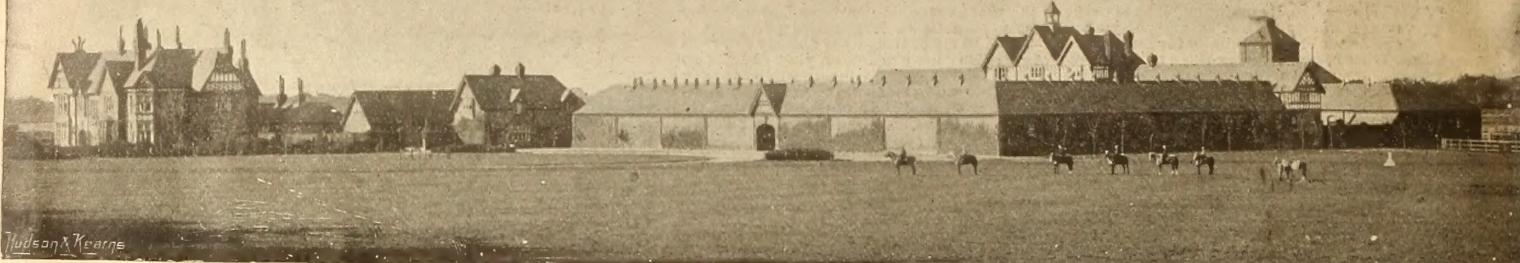
Choice new crop seed of highest growing quality, thoroughly recleaned and free from weed seeds. (See cut.) 12 cts. lb., \$6.50 bushel, \$10.00 per 100 lbs.



ALFALFA OR LUCERN.



We shall be pleased to make Special Prices { where possible } to buyers of large quantities of Grain or Grass Seed. { Write us. }



Hudson & Kearns

HENDERSON'S SPECIAL GRASS MIXTURES FOR.. HAY.. AND PERMANENT PASTURE HAVE SEEDED THOUSANDS OF ACRES IN AMERICA.

THE LARGEST
STOCK FARMS,
PROGRESSIVE
FARMERS,
AND THE
AGRICULTURAL PRESS
..PRAISE..
HENDERSON'S
SPECIAL GRASS
MIXTURES.



NEW YORK.

"I have been particularly well pleased with my pastures during this exceptionally dry autumn. They were seeded with your Permanent Grass Mixtures six and seven years ago, and have steadily improved during that time. When ordinary pastures were bare during the dry weather these gave constant feed."

JAS. WOOD,

Ex-President New York State Agricultural Society.

MARYLAND.

"In about 600 acres sown by me, some 250 were in open cleared woodland, the balance fields. In all cases the Grass Mixture took uniformly well and gave very satisfactory results."—W. T. BARNARD.

OHIO.

"The Special Grass Mixture for permanent meadow has given us the very best of satisfaction. It made a wonderful growth and has given us a large amount of hay and pasture per acre. It produced the finest piece of grass I ever saw."

W. J. HAYES.

MASSACHUSETTS.

"I cut 80 one-horse loads of well-cured hay from the Grass Mixture, estimated at one-half ton per load. I am well pleased with the result and am satisfied I got much more than I would from any one kind of grass."

GUY SMITH.

INDIANA.

"Your Special Grass Mixture has done well for me. It produced, this season, the largest crop of hay that I ever saw cut off the ground, and has been yielding a most excellent pasture for over a month past, and this notwithstanding the extraordinary severity of the drought in this vicinity."

R. S. TAYLOR.

PENNSYLVANIA.

"The Permanent Grass seed bought of you has proved a luxurious success. The result exceeds my expectations. In short I think it the best grass seed to be had, and shall use fifty bushels more in the spring."

W. H. REED.

MAINE.

"I laid down some three or four acres with your Special Mixture of Grass seed early last September and had a beautiful 'catch.' It was the wonder of all, and many persons thought it must be grain; it certainly looked splendidly, and it is splendid hay."

GEO. M. HOLMES.

NEW HAMPSHIRE.

"The quality of the Permanent Pasture Grasses is all that could be desired, as it makes fine hay."

DANIEL GILMAN.

"I have used your Permanent Grass Mixtures for the last 3 years and find them entirely satisfactory. They are all you claim them to be, having yielded two crops every season."—E. J. GEHRBEN.

NORTH CAROLINA.

"The Permanent Grass seeds purchased from you give entire satisfaction."—TIMOTHY DOLAN.

COLORADO.

"Your grass seed has given the best of satisfaction. They are the most reliable I have ever used."

SAM. STEVENSON.

CONNECTICUT.

"The mixed grasses have given better crops of hay and have not died out so bad as grasses sowed by themselves. After we had some little rain the mixed grasses started sooner and had a much greener look and have grown better afterwards. I would not again sow grasses alone, but would always sow the mixture."

H. L. STEWART.

RHODE ISLAND.

"I tried your mixture in order to avoid making 'Daisy Hay,' which seems to be the prevailing kind all about me, and I am glad to say I have so far succeeded in being free of that pest."

"As to quick growth after cutting, it has exceeded my expectations, and each year the lot looks like a lawn in a few days after cutting."

JULIUS PALMER.

NEW JERSEY.

"I wish I could send you a picture of my meadow of Permanent Grass now, after being cut twice, going into winter. I have the finest meadow in the county, says Geo. Lent, who keeps a thrashing machine and ought to know, as he goes about the county everywhere."

OTTO ANDREAE.